

# PATENT ABSTRACTS OF JAPAN

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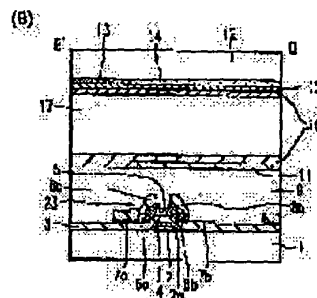
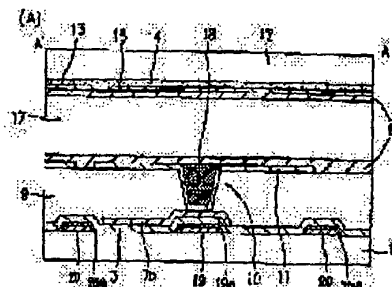
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(54) ACTIVE MATRIX SUBSTRATE, PRODUCTION OF ACTIVE MATRIX SUBSTRATE AND LIQUID CRYSTAL DISPLAY DEVICE

(57)Abstract:

**PROBLEM TO BE SOLVED:** To prevent disturbance in orientation of liquid crystal molecules in a contact hole part or production of voids and to improve the opening rate by embedding a recessed part of a pixel electrode with an embedding material to flatten the surface.

**SOLUTION:** An ITO film 7b is formed to the upper part of a pixel auxiliary capacitance signal line 19 so that the overlapped part of the ITO film 7b, a gate insulating film 3 and the pixel auxiliary capacitance signal line 19 acts as an auxiliary capacitance. An anodically oxidized film 19a is formed on the pixel auxiliary capacitance signal line 19. Further, an interlayer insulating film 9 is formed to cover a TFT 23, a gate signal line 20 and a source signal line 70, and a pixel electrode comprising a transparent conductive film is formed thereon. This pixel electrode 11 is connected to the drain electrode 6 of the TFT through a contact hole 10 and the ITO film 7b. An embedded part 18 is formed comprising an insulating material to fill the contact hole 10 on the pixel electrode 11 so that steps are flattened. Then an orienting film 16 is formed as flat thereon.



## LEGAL STATUS

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